Hewlett Packard Enterprise

Operations Analytics

System Requirements and Sizing Guide

Software version: 2.32

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Contents

System Requirements

This section provides information about the supported hardware and software that are required in order to successfully install and run HPE Operations Analytics.

Hardware

CPU cores must be 2.9 GHZ or higher

Tip: As Operations Analytics performance depends on processor speed, it is recommended to get the fastest possible processor speed to ensure proper performance.

Operating System

VMware Installations: HPE Operations Analytics Server virtual appliance and HPE Operations Analytics Collector virtual appliance install and run on VMware ESX/ESXi 6.0, 5.5, 5.0, 4.1.

Physical server Installations: HPE Operations Analytics Server and HPE Operations Collector install and run on CentOS 6.x (6.5 certified), RHEL 6.x (6.5, 6.6, and 6.7 certified), and Oracle Linux 6.x (6.5 certified). Operations Analytics requires a 64-bit operating system.

Databases

HPE Operations Analytics supports HPE Vertica 7.1.1-0 and HPE Vertica 7.2.0. You will need to deploy and configure a Vertica database for use by Operations Analytics. See HPE Vertica Analytics Platform Version 7.1.x Documentation and HPE Vertica Analytics Platform Version 7.2.x Documentation for more information.

Application Servers and Web Servers

HPE Operations Analytics deploys and uses JBoss Application Server 7.2.0. It does not need to be deployed on a separate web server.

ArcSight Logger

HPE Operations Analytics deploys and uses HPE ArcSight Logger, version 6.4. See the ArcSight Logger 6.4 Administration Guide and the ArcSight Logger 6.4 Installation Guide for more information.

Java

HPE Operations Analytics deploys and uses Java SE Development Kit 7 (OpenJDK 1.7.0_65).

Web Browsers

One of the following supported web browsers is required to access the HPE Operations Analytics user interface:

- Microsoft Internet Explorer 10 and 11
- Google Chrome (latest version)
- Mozilla Firefox 38 ESR

General Web Browser Requirements

Assuming that your browser is open to full screen for optimal viewing, the supported client display resolutions are as follows (depending on your display hardware):

- 1366x768
- 1920x 1080

Recommended: color palette setting of 32,000 colors

Languages

HPE Operations Analytics 2.32 will run in browsers whose interface is in any language. It displays in English only. HPE Operations Analytics 2.32 is not fully localized. However it does support data collection from any time zone, and the Operations Analytics user interface will display in the browser's local time zone.

Internationalization Variances

HPE Operations Analytics 2.32 will run in all locales as stated in this document with the following known variance:

- Non-English data input is not supported.

Virtualization Infrastructure

The HPE Operations Analytics VMware installation supports the following virtualization platform products:

- VMware ESX/ESXi 6.0, 5.5, 5.0, 4.1
- VMware vCenter Server 6.0, 5.5, 5.0, 4.1

Note: You may choose to deploy an HPE Operations Analytics physical installation on a virtual machine. In such case, Operations Analytics is agnostic as to virtualization platform and version. Follow the Operating System requirements for physical server installations.

Refer to HP Vertica 7.1.x Supported Platforms documentation for supported virtualization platform products for the Vertica database.

Note: HPE Vertica does not perform as fast in a virtual environment as it does in a physical server environment. This happens primarily because of the overhead and resource constraints imposed by the virtualization software. HPE Operations Analytics recommends using physical server environments wherever possible to achieve the best performance.

HPE Software Integrations

Information about HPE software that integrates with HPE Operations Analytics can be found on the HPE Software Support website.

See Software Support Online

For this release, Operations Analytics supports Splunk version 5.0.2+

Sizing Guide

Hardware Sizing

Use the sizing information in this section for HPE Operations Analytics VMware installations as well as physical server installations.

HPE Operations Analytics Server

Refer to the first table below for the number of Operations Analytics Servers recommended.

HPE Operations Analytics Collector

Refer to the tables below for the number of Operations Analytics Collector Hosts recommended.

Collecting Metrics (structured) data

For metrics (structured) data, deploy 1 HPE Operations Analytics Collector for each 250 GB/ day.

Collecting Logs and Events (unstructured) data

Each Operations Analytics Collector host can handle 250 GB per day, 3000 Events Per Second (EPS) maximum, assuming use of the TCP Forwarder method.
See the *Configuring Logger to Forward CEF Messages to Operations Analytics* of the Operations Analytics Configuration Guide for more information.

Note: If you plan to integrate Operations Analytics with Splunk, use one Operations Analytics Collector per Splunk per 125 GB of daily data volume.

The guidelines shown in the following tables for HPE Operations Analytics Collector disk size are suitable for most cases. In some extreme circumstances, there might be a need to shorten the retention policy for data files in the collector's *archive* folder. To do this, increase the cleanup frequency using the instructions in the *Managing Collected Data File Usage with Existing Delete Policies* section of the Operations Analytics Configuration Guide. If the combined data volume for a collector exceeds 250 GB per day, add HPE Operations Analytics Collectors.

HPE ArcSight Logger Components

Deploy 1 HPE ArcSight Logger for every 250 GB of data volume per day, assuming they are configured to forward CEF Messages to Operations Analytics.

See the ArcSight Logger 6.4 Administration Guide for detailed information.

HPE Vertica

The amount of storage for Vertica depends on your licensing and the amount of total stored data. HPE Operations Analytics defaults to a 3-months retention period.

For a multi-node Vertica cluster deployment, it is strongly advised to set the Vertica cluster's K-safety to 1. For example, for a three node Vertica cluster, set the K-safety to 1. This action often results in better end-to-end throughput and better resilience at the cost of slightly higher storage requirements. See High Availability for more information.

HPE has determined that Vertica runs optimally on physical servers with a two socket architecture. HPE has not certified Vertica to run on physical servers with more than two sockets. If the hardware you are using for Vertica has more than two sockets, you should disable the additional sockets. See the HPE Vertica Hardware Planning Guide for detailed information.

Summary

The following tables summarize the minimal hardware requirements for a HPE Operations Analytics deployment, based on the number of monitored hosts and expected daily volume for Metrics (structured) data and for Logs and Events (unstructured) data.

Table 1: Minimal hardware requirements for collecting Metrics (structured) data

Number of monitored Hosts	Total Metrics Daily Volume	HPE Operations Analytics Collectors	Minimum HPE Operations Analytics Server Recommendation	Optimal HPE Operations Analytics Server Recommendation	HPE Vertica Cluster Nodes[5]	Number of Concurrent Users
Up to 500	Up to 250 GB	1 Collector[4]	1 Server (4 CPU, 8 GB RAM, 40 GB HDD)	1 Server [6] (4 CPU, 8 GB RAM, 40 GB HDD)	1 Node Cluster[3]	5

		(8 CPU, 16 GB RAM, 200 GB HDD)			(8 CPU, 16GB RAM, 1TB HDD)	
Up to 5000	Up to 750 GB	3 Collectors[4] (8 CPU, 16 GB RAM, 200 GB HDD)		3 Servers (4 CPU, 8 GB RAM, 40 GB HDD)	3 Node Cluster[3] (16 CPU, 64GB RAM, 10TB HDD)	15
Up to 20,000 [1]	Up to 1250 GB	5 Collectors[4] (8 CPU, 16 GB RAM, 200 GB HDD)		3 Servers (4 CPU, 8 GB RAM, 40 GB HDD)	3 Node Cluster[3] (32 CPU, 256GB RAM, 10TB HDD)	25[2]

[1] If the number of monitored hosts exceeds 5000, contact HPE for consulting to determine the optimal hardware for your environment.

[2] Add 1 HPE Operations Analytics Server for every additional 5 Concurrent Users

[3] Add 1 HPE Vertica node for each additional 1TB of daily data

[4] Add 1 HPE Operations Analytics Collector for each additional 250 GB of daily data

[5] Use these specifications as general guidelines only. Refer to the HPE Vertica sizing documentation for actual sizing

[6] For the greatest data integrity it is recommended to deploy 3 HPE Operations Analytics Servers

Table 2: Hardware requirements for collecting Logs and Events (unstructured) data (in addition to the requirements shown in table 1)

Number of monitored Hosts	Total Logs & Events Daily Data Volume	HPE Operations Analytics Collectors[1][2]	HPE ArcSight Loggers[1][2]
Up to 500	Up to 250 GB	1 Collector (8 CPU, 16 GB RAM, 200 GB HDD)	1 ArcSight Loggers (4 CPU, 12 GB RAM, 850 GB HDD)
Up to 5000	Up to 1000 GB	4 Collectors (8 CPU, 16 GB RAM, 200 GB HDD)	4 ArcSight Loggers (4 CPU, 12 GB RAM, 850 GB HDD)
Up to 20,000	Up to 4000 GB	16 Collectors (8 CPU, 16 GB RAM, 200 GB HDD)	16 ArcSight Loggers (4 CPU, 12 GB RAM, 850 GB HDD)

[1] Double the number of Operations Analytics Collector hosts when not using HPE ArcSight Logger with "TCP (CEF) Forwarding"

[2] Each HPE Operations Analytics Collector host processes a maximum of 250 GB /day of data volume and 3000 Events Per Second (EPS).

High Availability

There is no product-specific mechanism for High Availability (HA) nor Disaster Recovery (DR) of Operations Analytics components. To implement DR for HPE Operations Analytics Server and HPE Operations Analytics Collector, you must rely on mechanisms available in your underlying IT architecture such as VMware High Availability, server clustering, or other application-agnostic technologies. You should implement these DR methods for both Operations Analytics Collector and Operations Analytics Server, as a failure of one host can affect the product as a whole. Multiple Operations Analytics Servers can be load balanced and accessed through virtual IP addresses to optimize performance. For your Database supporting Operations Analytics, Vertica offers a K-Safety configuration for fault tolerance, and offers recovery and replication options for HA and DR. Operations Analytics should be connected to Vertica using a Virtual IP (IPVS) and will use native connection load balancing if you have enabled it using the instructions shown in the **Database Load Balancing** section of the *Operations Analytics Installation Guide*.

These links might be helpful:

- Designing for K-Safety

- Best Practices for Disaster Recovery

- Connection Load Balancing Using IPVS

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